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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,927	11/08/2001	Masahiro Yamamura	10873.842US01	7821

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EXAMINER	
CLEVELAND, MICHAEL B	
ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,927	YAMAMURA ET AL.	
	Examiner	Art Unit	
	Michael Cleveland	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-9 in the reply filed on 8/6/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicant has canceled non-elected claim 10.

Claim Objections

2. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. ATO and ITO are electroconductive. Accordingly, claim 4 does not further limit parent claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (U.S. Patent 6,086,790, hereafter '790).

'790 teaches a method of treating a surface of a face panel used for an image display device (col. 1, lines 6-16), comprising formation of at least one layer of coating film on a panel by spraying (col. 18, lines 64-66) a coating material comprising microparticles and a mixture of solvents (col. 22, lines 9-50). The coating may also comprise microparticles of ITO or ATO (col. 6, lines 43-49) and a black powder (col. 6, lines 50-61).

'790 does not explicitly teach a particular embodiment which uses ethylene glycol, a propylene glycol ether, water, and an alcohol with 1-3 carbon atoms. However, it does teach that operative solvents include ethylene glycol (col. 22, lines 33-36), polyalkyleneglycol ethers (col. 22, lines 36-39) such as propylene glycol methyl ether (col. 21, lines 13-16), water (col. 23, lines 13-15) and methanol (an alcohol with 1 carbon atom) (col. 23, lines 23-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a combination of ethylene glycol, propylene glycol methyl ether, water, and methanol, as the particular solvent of '790 with a reasonable expectation of success because '790 teaches that they are operative solvents for applying the powders and that mixtures of solvents are operable for applying the powders.

Claim 2: Ethylene glycol (a polyhydric alcohol may be present in amount up to 30 wt. %) (col. 17, lines 46-47; col. 22, lines 30-32), propylene glycol methyl ether may be present in at 1-30 wt. % (col. 21, lines 13-20), and water may be present up to 20 wt. % (col. 13, lines 53-56). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549. Furthermore, it has long been held that "differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical." (MPEP 2144.05.II.A.)

Claim 3: The powder may be present in 0.1-15 wt. % (col. 9, lines 55-60). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the

reference because overlapping ranges have been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549.

Claim 4: ITO and ATO are electroconductive.

Claim 5: The powder may be up to 0.1 microns (50 nm) (col. 6, lines 43-61).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi '790 as applied to claim 1 above, and further in view of Sato et al. (U.S. Patent 5,270,072, hereafter '072).

'790 teaches applying antireflective films of metal powders to CRTs as described above. It does not each that the panel is heated to 50-90 °C during spraying. '072 teaches that the drying rate and adhesion are optimized in the spraying of antireflective coatings onto CRTs at temperature of 50-70 °C (col. 15, lines 19-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have heated the panel of '790 to 50-70 °C during spraying because '072 teaches that such panel temperatures offer an operative compromise of adhesion and drying speed.

7. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi '790 as applied to claim 1 above, and further in view of Kojima et al. (U.S. Patent 5,660,876, hereafter '876).

'790 teaches applying antireflective films of metal powders to CRTs as described above. It does not teach a spraying pressure of 0.2-0.6 MPa nor using compressed air to air spray the spray through a nozzle. However, the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. '876 teaches spraying powder-containing liquids onto CRTs using air nozzles (Fig. 5) operable by compressed air (col. 2, lines 49-51) at a spraying pressure of 3.5 kg/cm^2 (0.34 MPa) (col. 4, lines 52-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used compressed air to spray the dispersion of '790 because '876 teaches that compressed air nozzles are operative to supply powder dispersions to CRTs. Likewise, it would have been obvious to one of ordinary skill in the art at the time the invention

was made to have used a spraying pressure of 0.34 MPa because '790 teaches that such is an operative pressure.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi '790 and Kojima '876 as applied to claim 7 above, and further in view of Koike et al. (U.S. Patent 4,734,615, hereafter '615).

'790 and '876 teaches applying antireflective films of metal powders to CRTs using a pressure such as 0.34 MPa as described above. They do not explicitly teach that the nozzle is 150-220 nm from the substrate. However, the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. '615 teaches a spraying distance of 20-30 cm for depositing powder suspensions onto CRTs (col. 4, lines 34-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a spraying distance of 20 cm (200 mm) because '615 teaches that such is an operative distance.

Response to Arguments

9. Applicant's arguments filed 8/6/2004 have been fully considered but they are not persuasive.

Applicant appears to argue that Table 1 demonstrates unexpected results for the use of the claimed composition. The argument is unconvincing because the claims are not commensurate in scope with the showing, which are not limited to the particular composition of the Table (with all concentrations and components identical), nor the particular conditions of application and subsequent treatment.

Applicant argues that Hayashi does not lead to the particular combination of claim 1. The argument is unconvincing because it has long been held that "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re *Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

Applicant argues that the primary teaching of Hayashi is the provision of fine metals, not oxides. The argument is unconvincing because Hayashi explicitly suggests that ATO and ITO microparticles may be included in the coating. Likewise, Applicant argues that the primary focus of Hayashi is spin coating. The argument is unconvincing because Hayashi such focus does not disguise the explicit teaching that the coatings may be applied by spraying.

Applicant's arguments that spray coating with ATO or ITO would be recognized as more likely to have problems with irregularities than spin coating are unsupported by evidence.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Monday-Thursday, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Cleveland
Examiner
Art Unit 1762

10/5/2004